

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/40295

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : H01L 27/108 US CL : 257/301, 752 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 257/301, 306, 752, 750, 753, 754, 758, 759, 760; 438/622, 623 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched NONE Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) NONE		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,335,598 B1 (Hsu et al.) 25 December 2001 (25.12.2001), fig. 24, column 7, lines 48-50, column 9 line 5, column 14 lines 15-55	1-9
A	US 2003/0211724 A1 (Haase) 13 November 2003 (13.11.2003), see entire document.	1-9
A	US 2003/0165418 A1 (Ajayan et al.) 04 September 2003 (04.09.2003), see entire document.	1-9
A	US 2003/0100189 A1 (Lee et al.) 29 May 2003 (29.05.2003), see entire document.	1-9
A	US 2003/0179559 A1 (Engelhardt et al.) 25 September 2003 (25.09.2003), see entire document.	1-9
A	US 6,599,808 B2 (Kim et al.) 29 July 2003 (29.07.2003), see entire document.	1-9
A	US 6,340,822 B1 (Brown et al.) 22 January 2002 (22.01.2002), see entire document.	1-9
A	US 6,286,226 B1 (Jin) 11 September 2001 (11.09.2001), see entire document.	1-9
A	US 2002/0163079 A1 (Awano) 07 November 2002 (07.11.2002), see entire document.	1-9
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"B"	earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 21 April 2004 (21.04.2004)		Date of mailing of the international search report 06 AUG 2004
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer <i>Shawn S. Happe</i> Wael M Fahmy Telephone No. 703-308-0956

**INTERNATIONAL SEARCH REPORT**

PCT/US03/40295

**C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,566,704 B2 (Choi et al.) 20 May 2003 (20.05.2003), see entire document.	1-9
A	US 6,548,313 B1 (Ravi et al.) 15 April 2003 (15.04.2003), see entire document.	1-9
A	US 2002/0167375 A1 (Hoppe et al.) 14 November 2002 (14.11.2002), see entire document.	1-9
A	US 2002/0125805 A1 (Hsu) 12 September 2002 (12.09.2002), see entire document.	1-9